

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A method of fabricating a cartilage implant comprising:
embedding chondrocytes or mesenchymal stem cells in a three-dimensional substrate, the
substrate containing randomly rewound, non-crosslinked α -helical monomers from partially
digested type I collagen; and
growing the chondrocytes or mesenchymal stem cells in the substrate;
thereby producing a cartilage implant.
2. (Previously presented) The method of claim 1, wherein the substrate further
contains randomly rewound α -helical monomers from partially digested type II collagen.
- 3-5 (Canceled)
6. (Original) The method of claim 2, wherein the chondrocytes or mesenchymal
stem cells, the type I collagen, and the type II collagen are prepared from two or three different
animal sources.
7. (Currently amended) ~~The method of claim 2, wherein,~~ A method of fabricating a
cartilage implant comprising:
embedding chondrocytes or mesenchymal stem cells in a three-dimensional substrate, the
substrate containing randomly rewound α -helical monomers from partially digested type I
collagen; and
growing the chondrocytes or mesenchymal stem cells in the substrate, thereby producing
a cartilage implant;

wherein the substrate further contains randomly rewound α -helical monomers from partially digested type II collagen, and during the growing step, the chondrocytes or mesenchymal stem cells and the substrate are placed in a rotating and oscillating vessel.

8. (Canceled)

9. (Original) The method of claim 1, wherein the chondrocytes or mesenchymal stem cells and the type I collagen are each prepared from a different animal source.

10. (Currently amended) ~~The method of claim 1,~~ A method of fabricating a cartilage implant comprising:

embedding chondrocytes or mesenchymal stem cells in a three-dimensional substrate, the substrate containing randomly rewound α -helical monomers from partially digested type I collagen; and

growing the chondrocytes or mesenchymal stem cells in the substrate, thereby producing a cartilage implant;

wherein, during the growing step, the chondrocytes or mesenchymal stem cells and the substrate are placed in a rotating and oscillating vessel.

11. (Currently amended) A method of fabricating a cartilage implant comprising:
embedding chondrocytes in a three-dimensional substrate, the substrate containing randomly rewound, non-crosslinked α -helical monomers from partially digested type I collagen;
and

growing the chondrocytes in the substrate;
thereby producing a cartilage implant.

12. (Previously presented) The method of claim 11, wherein the substrate further contains randomly rewound α -helical monomers from partially digested type II collagen.

13-15 (Canceled)

16. (Currently amended) A cartilage implant comprising:
chondrocytes; and
a three-dimensional matrix, the matrix containing randomly rewound, non-crosslinked α -helical monomers from partially digested type I collagen;
wherein the chondrocytes are embedded in the matrix.

17. (Previously presented) The cartilage implant of claim 16, wherein the matrix further contains randomly rewound α -helical monomers from partially digested type II collagen.

18-20 (Canceled)

21. (Original) The cartilage implant of claim 17, wherein the chondrocytes, the type I collagen, and the type II collagen are prepared from two or three different animal sources.

22. (Canceled)

23. (Previously presented) The cartilage implant of claim 16, wherein the chondrocytes and the type I collagen are each prepared from a different animal source

24. (Original) The cartilage implant of claim 16, wherein the chondrocytes and the type I collagen are each prepared from a different animal source.